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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/492,029	01/26/2000	Charles S. Zuker	2307E-92710US	9362
20350	7590	11/17/2003	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			RAO, MANJUNATH N	
			ART UNIT	PAPER NUMBER
			1652	

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/492,029

Applicant(s)

ZUKER ET AL.

Examiner

Manjunath N. Rao, Ph.D.

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 10-14-03 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 14 October 2003. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attached.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-29.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Advisory Action

While applicants' response has overcome the objection of claims 25-27, their arguments are still not persuasive to overcome the rejection of claims 1-29 rejected under 35 U.S.C. 103(a) as being unpatentable over Margolskec et al. (WO 93/21337, 10-28-1993), Bruch et al. (JBC, 1987, Vol. 262(5):2401-2404), Levine et al. (Proc. Natl. Acad. Sci. USA, 1990, Vol. 87:2329-2333) or Ray et al. (Gene, 1994, Vol. 149:337-340) and Negulescu et al. (WO 97/48820, 12-24-1997).

In response to the previous Office action applicants continue to traverse the above rejection mainly arguing that Margolskee et al. while, disclosing Gustducin, a G-protein α subunit specifically expressed in taste cells, does not disclose the taste cell specific G-protein β subunits of the present invention or its amino acid sequence and that while Ray et al. and Levine et al. disclose the sequence identity of the claimed β subunits, those polypeptides were cloned from heart cDNA library and have shown its expression in heart and brain but not in taste cells of the tongue. Applicants also argue that Examiner has not identified the reasons for motivation and that he has resorted to hindsight reasoning.

Examiner respectfully disagrees with such an argument. While the reference of Margolskee et al. is directed towards identification of compounds that modulate the activity of an α subunit of a G-protein in taste signal transduction, the publication does refer to other subunits such as the β and the γ . Examiner maintains his argument that the reference of Margolskee et al. by itself does contribute towards the obviousness and motivation for identification of compounds that modulate the activity of G-proteins involved in taste signal transduction. However, in order to support his rejection and counter the arguments by applicants that Margolskee et al. does not teach involvement of β subunit in taste signal transduction, Examiner

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has provided the reference of Bruch et al. which links the involvement of β subunit with taste modalities. Examiner vehemently disagrees with the applicants that he used hindsight reconstruction in concluding the obviousness of the claims. This is because, Margolskee et al. teach the importance of identification of compounds that modulate the taste signal transduction in general and while specifically directing their invention to identify compounds that modulate gustducin, the reference does provide a suggestion that compounds that modulate either α , β or γ have commercial value in food and pharmaceutical industry. Therefore, there was motivation and also a reasonable expectation of success in the art for identifying compounds that modulate taste signal transduction in general and applicant's argument that one of skill in the art would have arrived at such a conclusion only after reading the applicant's specification is highly misplaced.

Applicants also argue that as Bruch et al. fails to provide an amino acid sequence and therefore one of skill in the art would not know if the Bruch et al. G-protein had the same amino acid sequence to the presently claimed protein or that it is related to Ray or Levine proteins. Examiner respectfully disagrees with such an argument. This is because Bruch et al. clearly identify their protein as the β -protein and it is well within the knowledge of those skilled in the art to determine the amino acid sequence of a protein.

Applicants also argue that as Bruch et al. reference fails to provide the amino acid sequence it is non enabled. Examiner respectfully disagrees with such an argument. As stated above it is well within the knowledge of those skilled in the art to determine the amino acid sequence of a protein. Furthermore, the requirement of the amino acid sequence is not critical to

the above invention. What is critical is the availability of the information that β -protein is involved in taste signal transduction and that is provided by Bruch et al. reference.

Regarding the references of Ray et al. and Levine et al., Examiner agrees that isolated the G-protein subunit from a different tissue, Examiner has used the references only to show that their amino acid sequences were available for those skilled in the art. After all, it would be obvious to those skilled in the art to do a search of the databases to see whether such a protein with its sequence is available in the art. Both the above references are used to further support the rejection. Therefore, even without the references of Ray et al. and Levine et al. above claims would have been rendered obvious by Bruch et al. and Margolskee et al. as they teach the main substance of the above invention.

Applicants continue their argument that Examiner's conclusion of the amino acid sequence being inherent to a protein is incorrect. Examiner respectfully disagrees with such an argument. It is well known in the art that all proteins have an amino acid sequence. There is no hind sight reasoning involved in such a conclusion. As stated above it would be have been obvious to those skilled in the art to do a search of the databases to see whether a β -protein with its sequence is available in the art.

Therefore the claimed invention would have been *prima facie* obvious to one of ordinary skill in the art.

Therefore for all the above reasons the rejection is maintained.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manjunath N. Rao, Ph.D. whose telephone number is 703-306-5681. The examiner can normally be reached on 7.30 a.m. to 4.00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy can be reached on 703-308-3804. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0196.

Manjunath N. Rao
November 5, 2003

Rebecca R. R. R.
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